

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph at page 5, line 27 to page 6, line 19 with the following paragraph:

Magnetic writer 100 provides a high gradient field at the ABS. When an electric current is caused to flow through conductive coils 108, a magnetic flux is flows through top pole 102 and bottom pole 104, as is shown by the magnetic flux arrows, M, on each portion of top pole 102 and bottom pole 104. For optimal functionality of magnetic writer 100, the magnetic flux should be flowing parallel or substantially parallel to the ABS at the writing pole (first top pole portion 110). As is shown, the magnetic flux flows perpendicular to the ABS through second top pole portion 114.

By incorporating top pole extension 112, the magnetic flux direction is changed from flowing perpendicular to the ABS at second top pole portion 114 to flowing substantially parallel to the ABS at first top pole portion 110. Top pole extension 112 has more length than first top pole portion 110 along the ABS, which allows the magnetic flux to transition from flowing perpendicular to the ABS at second top pole portion 114 to generally parallel to the ABS at first top pole portion 110. This minimizes distortion to data transitions on magnetic disc 12, which are formed at first top pole portion 110 where the writing field is equal to the effective dynamic coercivity of magnetic disc 12. Furthermore, as can be seen in FIG. 1b, top pole extension 112 has a uniform width, w , at the ABS. This reduces or eliminates excessive fringe erasure fields emanating from top pole extension 112, since the uniform width at the ABS prevents high magnetization levels. Also, this design minimizes the area of overlap between base pole 122 and top pole extension 112 to keep fringe fields below erasure threshold.

Please replace the paragraph at page 9, lines 3-23 with the following paragraph:

Magnetic writer 200 provides a high gradient field at the ABS. When an electric current is caused to flow through conductive coils 208, a magnetic flux is caused to flow through top pole 202 and bottom pole 204, as is shown by the magnetic flux arrows, M, on each portion of top pole 202 and bottom pole 204. For optimal functionality of magnetic writer 200, the magnetic flux

-3-

should be flowing parallel or substantially parallel to the ABS at the writing pole (first top pole portion 210). As is shown, the magnetic flux flows perpendicular to the ABS through second top pole portion 214. By incorporating top pole extension 212, the magnetic flux direction is changed from flowing perpendicular to the ABS at second top pole portion 214 to flowing substantially parallel to the ABS at first top pole portion 200. Top pole extension 212 has more length than first top pole portion 210 along the ABS, which allows the magnetic flux to transition from flowing perpendicular to the ABS at second top pole portion 214 to generally parallel to the ABS at first top pole portion 210. This minimizes distortion to data transitions on magnetic disc 12, which are formed at first top pole portion 210 where the writing field is equal to the effective dynamic coercivity of magnetic disc 12. Furthermore, as can be seen in FIG. 2b, top pole extension 212 has a uniform width, w , at the ABS. This reduces or eliminates excessive fringe erasure fields emanating from top pole extension 212, since the uniform width at the ABS prevents high magnetization levels. Also, this design minimizes the area of overlap between base pole 222 and top pole extension 212 to keep fringe fields below erasure threshold.